

Claims

- [c1] 1.A fifth wheel hitch trailer pin assembly, for connecting a trailer to a towing vehicle equipped with a fifth wheel locking assembly, comprising:
- (a)a collar attached to the trailer;
 - (b)means for pivotally attaching the collar to the bracket assembly, about a substantially longitudinal axis that extends from the front of the towing vehicle to the rear of the trailer;
 - (c)a skid plate connected to the bottom of the bracket assembly; and
 - (d)a king pin connected to the bottom of the skid plate.
- [c2] 2.A fifth wheel hitch trailer pin assembly of claim 1 in which the means for pivotally attaching the bottom of the collar to the top of a bracket assembly consists of a pivot joint comprising:
- (a)a sleeve situated through the collar;
 - (b)a bracket assembly with plates positioned on both the front side and rear side of the collar about the axis that extends from the front of the towing vehicle to the rear of the trailer;
 - (c)a roller pin situated inside and able to rotate within

the sleeve, which extends past both the collar and the front side and rear side of the bracket assembly, which allows the collar to rotate with respect to the kingpin; and

(d)bushing caps on both terminal ends of the roller pin.

[c3] 3. A fifth wheel hitch trailer pin assembly of claim 2 in which the collar has a grease nipple connected to a passageway into said sleeve, allowing lubricant to be inserted in the space between the sleeve and the roller pin.

[c4] 4.A pivot joint for a fifth wheel hitch trailer pin assembly having a collar, skid plate and king pin comprising:

(a)a cylindrical sleeve situated through the collar oriented substantially horizontally and aligned with an axis that extends from the front of the trailer to the rear of the tractor;

(b)a bracket assembly with plates positioned on both the front side and rear side of the collar about the axis that extends from the front of the towing vehicle to the rear of the trailer;

(c)a roller pin situated inside and able to rotate within the sleeve, which extends past both the collar and the front side and rear side of the bracket assembly, which allows the collar to rotate with respect to the kingpin; and

(d)bushing caps on both terminal ends of the roller pin.

[c5] 5. A fifth wheel hitch trailer pin assembly of claim 4 in which the collar has a grease nipple connected to a passageway into said sleeve, allowing lubricant to be inserted in the space between the sleeve and the roller pin.